ABSTRACT

METAL-OXIDE-METAL CAPACITOR FOR ANALOG DEVICES

A method for fabricating a metal-oxide-metal capacitor is described. A first insulating layer is provided overlying a semiconductor substrate. A conducting line is formed on the surface of said first insulating layer to act as the node contact for the capacitor. A second insulating layer is deposited overlying the conducting line. The second insulating layer is etched through to form contact or via openings to the conducting line. The contact/via openings are filled with metal plugs wherein the metal plugs form the bottom plate electrode of the capacitor. The second insulating layer surrounding the metal plugs is etched into to form a trench for the capacitor. A capacitor dielectric layer is deposited over the surface of the second insulating layer and the metal plugs. A barrier metal layer is deposited overlying the capacitor dielectric layer. A metal layer is deposited overlying the barrier metal layer and patterned to form the upper plate electrode of the capacitor completing the fabrication of a metal-oxide-metal capacitor.

(FIGURE 1 IS SUGGESTED FOR PUBLICATION)